

CENTRAL INTELLIGENCE AGENCY

REPORT

CD NO.

COUNTRY: Czechoslovakia

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SUBJECT Svaty Kriz Aluminum Works

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1. After the agreement between the United States and the Czechoslovakia set 140 thousand annual tons of alumina and 40 thousand tons of metal as its production goal, to begin late in 1954. The works is to be located at Svaty Křiž on the banks of the Hron River.
2. Czechoslovakia has no bauxite, so it will be necessary to import its entire requirements from Hungary. The two governments entered into an agreement in 1951 which states that Hungary will export 300 thousand metric tons of bauxite to Czechoslovakia every year, sufficient for about 140 thousand tons of alumina. The Hungarian high-grade bauxite resources above 12-ratio are nearing exhaustion, therefore, in this agreement the quality of the bauxite for Czechoslovakia is standardized on a seven Al_2O_3/SiO_2 ratio. Hungary will deliver most of this bauxite from its new mine at Halimba.
3. Hungary has not designed the alumina plant for the Czechs because it has not had enough experience with the operation of the low-ratio type of bauxite. The Hungarian bauxite-alumina industry has been operating on a higher ratio, and all its plants were originally designed for a bauxite above twelve-ratio. The Czechs have no aluminum experts, because they have not had an aluminum industry. The plans of the Czech alumina plant therefore were to be made by Soviet experts and construction was to begin in late 1952. It is said that the new plant will operate with the "Pyrogen" method. This process is well-known in the literature but in the opinion of Hungarian experts, the method is out-of-date.
4. Plans for the Czech reduction works were made by the Hungarians at their Institute of Research. All the plans and the machine designs were delivered to the Czechs in late 1951. Designs are exactly the same as at Inota in Hungary and the electrical equipment will be identical, except that the Czech installation will have two 20 thousand-ton potlines. A structural difference between the two is that the Hungarian works was built with prefabricated concrete construction, whereas the Czechs, who do

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not have the necessary training with prefabricated reinforced concrete, will build their buildings of steel construction. They have no critical shortage of steel as in Hungary and are skilled in its use.

5. As late as December 1951 the only progress made was in the preparation of the site. The Czechs began to work with enthusiasm using six bulldozers, about twelve earth scrapers, and many trucks. The designs were made so that if necessary the reduction works could be expanded with an additional potline. The alumina plant will be built on the same site. The transportation of bauxite will be by rail from Hungary, and the Hungarian Government will build special forty-ton capacity railroad cars for this purpose.
6. The reduction works will come into operation 18 months earlier than the alumina plant, therefore, in the agreement there is a stipulation that for the first two years operation of the Czech reduction works, Hungary will deliver alumina instead of bauxite. Consent of the USSR to this agreement had to be obtained because alumina diverted to the Czechs would diminish the Soviet supply from Hungary.

Electrical Power Supply

7. Electric power will eventually be supplied from a thermal power station about 10 km down the Hron River from the aluminum works. Later it is presumed that hydroelectric power will become available from the proposed Slovakian power program. In the meantime transmitted power will be obtained from the Moravian power plants not far from Moravaka Ostrava. This transmission line will be the first in the Satellite States operating with 220 thousand volts. The same line will extend to Hungary to supply current to the Hungarian power grid. A hazard to continuous supply of power is expected because the route of the 220 thousand volt transmission line goes over the Carpathian Mountains at least 1,200 meters above sea level and in a region where frequent wind storms cause some damage to the cables. The reduction works is planned to begin operation in the summer of 1954 and the alumina factory according to schedule in late 1955.

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